



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

15 JUL 1986

Docket Nos.: 50-315
and 50-316

Mr. John Dolan, Vice President
Indiana and Michigan Electric Company
c/o American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43216

Dear Mr. Dolan:

By letter dated May 22, 1986, the Indiana and Michigan Electric Company (IMEC) requested changes to the Bases sections of the Technical Specifications for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2. These changes involve 1) a definition of continuous fire watch, 2) a clarification of the frequency of patrol for an hourly fire watch patrol, and 3) a further addition to the definition of Operable for a fire-rated assembly and/or sealing device.

We have evaluated each of the proposed changes and find that they do not change the intent of the Technical Specifications and are consistent with staff discussions on the issues. The continuous fire watches at the D.C. Cook Nuclear Plant have been assigned as one person to each of a number of fire zones within an area. For a number of areas these fire zones are readily accessible and easily viewed by a single fire watch on a frequency of about every fifteen minutes. This method of applying the fire watches will reduce the number of persons within the areas at a given time. Because some zones have high radiation and the person is not required to be in the zone at all times, the exposures to fire watches may also be reduced. The fifteen minutes patrol with a margin of five minutes is acceptable.

The change to clarify the frequency of the hourly fire watch patrols by defining the intervals as sixty minutes with a margin of fifteen minutes is consistent with other Technical Specification surveillance frequencies which allow margins of 25%. This change is acceptable.

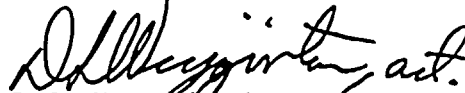
The last proposed change is to add to the definition of Operable for a fire-rated assembly and/or sealing device. To the extent that these assemblies and sealing devices are capable of performing their intended safety function either automatically or manually each time they are opened, we find the proposed change acceptable provided that the failed component is repaired in a prudent and reasonable time period and the safety function is maintained. We believe this is explicit in the proposed change and therefore find it acceptable.

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- 2 -

As we stated above, we find the proposed changes to the bases sections do not change the intent of the Technical Specifications. The changes may be implemented at the convenience of IMEC. If there are any questions on this matter, please let us know.

Sincerely,

A handwritten signature in dark ink, appearing to read "B.J. Youngblood", followed by the word "act." in a smaller, less legible script.

B.J. Youngblood, Director
PWR Project Directorate #4
Division of PWR Licensing-A

Enclosure:

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Mr. John Dolan
Indiana and Michigan Electric Company

Donald C. Cook Nuclear Plant

cc:
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Vice President
Nuclear Operations
American Electric Power Service
Corporation
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Division of Radiological Health
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ATTN: AIR FORCE SYSTEMS COMMAND
FROM: SAC, AIR FORCE SYSTEMS COMMAND
SUBJECT: [Illegible]

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BASIS

3/4.7.9 Cont.

The purpose of the charcoal filter fire suppression T/S is to account for detection and suppression of fires in the charcoal filters. Manual operation of these systems is allowed because two-point heat detection with control room and local annunciation of trouble conditions is provided for the charcoal filters. The OPERABILITY of the fire suppression system protecting the charcoal filters is only required when there is charcoal in the filters. Actuation of spray water onto the charcoal filters requires both the manual opening of the system isolation valve and reaching the high temperature alarm setpoint for the automatic opening of the system deluge valve.

Because of the inaccessibility of the lower containment to personnel during operation due to ALARA radiation exposure concerns, the use of one or more CCTVs in the lower containment, to monitor for fire and smoke, is an acceptable substitute to an hourly fire watch, if the fire suppression system becomes inoperable.

All hourly fire watch patrols are performed at intervals of sixty minutes with a margin of fifteen minutes.

A continuous fire watch requires that a trained individual be in the specified area at all times and that each fire zone within the specified area be patrolled at least once every fifteen minutes with a margin of five minutes.

3/4.7.10 FIRE RATED ASSEMBLIES

The OPERABILITY of the fire barriers and barrier penetrations ensure that fire damage will be limited. These design features minimize the possibility of a single fire involving more than one fire area prior to detection and extinguishment. The fire barriers, fire barrier penetrations for conduits, cable trays and piping, fire dampers, and fire doors are periodically inspected to verify their OPERABILITY. The ventilation seals are seals around ventilation duct work penetrating fire barriers.

For the purpose of determining OPERABILITY, an OPERABLE fire rated assembly and/or sealing device is one that is capable of performing its intended safety function.

PLANT SYSTEMS

BASES

other tasks (e.g., an operator on tour) provided that such personnel fulfilled the above stated requirements. As a minimum, each area affected by an isolated low pressure CO₂ system must be visited every twenty-five (25) to thirty-five (35) minutes by the Roving Fire Watch Patrol. Such measures will provide the necessary level of fire protection while affording necessary provisions for personnel safety.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire-fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurance that the minimum OPERABILITY requirements of the fire suppression systems are met. An allowance is made for ensuring a sufficient volume of Halon and CO₂ in the storage tanks by verifying either the weight, level, or pressure of the tanks.

In the event the fire suppression water system becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. The requirement for a twenty-four hour report to the Commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued protection of the nuclear plant.

The purpose of the charcoal filter fire suppression T/S is to account for detection and suppression of fires in the charcoal filters. Manual operation of these systems is allowed because two-point heat detection with control room and local annunciation of trouble conditions is provided for the charcoal filters. The OPERABILITY of the fire suppression system protecting the charcoal filters is only required when there is charcoal in the filters. Actuation of spray water onto the charcoal filters requires both the manual opening of the system isolation valve and reaching the high temperature alarm setpoint for the automatic opening of the system deluge valve.

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PLANT SYSTEMS
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Sincerely,

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B.J. Youngblood, Director
PWR Project Directorate #4
Division of PWR Licensing-A


Enclosure:


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1. The first step is to identify the problem. This involves understanding the current situation and the goals that need to be achieved.

440, 1953

Journal of Management Education 30(6)p. 789-804
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Figure 1. The effect of the concentration of the *Agrobacterium* strain on the transformation efficiency of *Agrobacterium* strains. The *Agrobacterium* strains were grown in YEA medium for 24 h at 28°C. The cell concentration was adjusted to 10⁸ cells/ml. The cell suspension was mixed with the plant tissue and incubated for 24 h at 28°C. The plant tissue was then cultured on the selective medium. The transformation efficiency was determined as the number of transformants per 100 mg of plant tissue. The data are the mean ± SD of three independent experiments.